4. Clarabelle

Program Name: Clarabelle.java **Input File: clarabelle.dat**

Clarabelle Ono has always been disappointed with her first name. Her Mom and Dad wanted their youngest child to have a very fancy name, so they gave her that 10-letter name. Their older children, Asa, Nan, Ava, Eve, Bob, and Ana all had three-letter palindrome names, but not Clarabelle.

Clarabelle owns a guinea pig farm and she is determined to name every one of her animals with a three-letter palindrome like her family. She is getting desperate. She now is looking at every work she encounters to see if somewhere inside, a three-letter palindrome is hidden. Please help her by writing a program.

Read in a word written in all lowercase letters which contains [a,z]. The words you will test have lengths in the range of [3,12] letters. Your job is to print a list of three-letter palindromes that are hidden in the input word. These palindromes will consist of three consecutive letters that appear in the word.

You will list the palindromes in alphabetical order, making sure to list each palindrome only one time.

Input: First line contains a single integer **T** representing the number of test cases that follow with **T** ≤ 10. Each test case will consist of one word with at least 3 letters and not more than 12 letters. The words may not contain any other characters except for lowercase letters.

Output: For each test case, output an alphabetical list of three-letter palindromes using a single space to separate the words. If there are no palindromes, output **NONE**.

Sample input:

```
5
qwqtquqoqhqh
university
tttrrraaappp
bob
utututututut
```

Sample output:

```
hqh qhq qoq qtq quq qwq
NONE
aaa ppp rrr ttt
bob
tut utu
```